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- the measured data is then used to calculate a predicted traffic volume for a next period
- a subsequent reservation of resources, which corresponds to the predicted traffic volume, is carried out in the packet data network (PN) for said next period and
- the predicted traffic volume is determined using the following formula:

in which case t corresponds to a time, T a measuring period, $VM(t)$ a current traffic volume at the point in time t , $VM(t-T)$ a preceding traffic volume at the point in time $t-T$, $VMP(t+T)$ a predicted traffic volume for the point in time $t+T$, $\ddot{U}F$ an overbooking factor and TF a trend factor.

3. Method in accordance with one of the claims 1 to 2, characterized in that the traffic volume corresponds to the data volume transmitted during a measuring period.

4. Method in accordance with one of the claims 1 to 3, characterized in that to determine the predicted traffic volume the extent to which a requested transmission quality could be fulfilled by the packet data network (PN) in a period is taken into account.

5. Method in accordance with claim 4, characterized in that in the case of an increase/decrease in the transmission capacity of the packet data network (PN), a predicted traffic volume from the one measuring period to the next measuring period is increased/decreased.

6. Method in accordance with one of the claims 1 to 5, characterized in that,

- Media Gateways (MG) are provided as an interface between the packet data network (PN) and a connection-oriented telecommunications network that is connected to said data network,
- a Media Gateway Controller (MGC) is provided for controlling the Media Gateways (MG) and
- the predicted traffic volumes are determined for each traffic direction by the Media Gateway Controller (MGC) and are distributed to the Media Gateways (MG) in order to reserve the resources in the packet data network.

7. Method in accordance with claim 6, characterized in that trunk group-oriented call statistics or a traffic matrix VM managed in a Media Gateway Controller (MGC) or in a Call Feature Server are used in order to determine the data throughput.

8. Media Gateway Controller (MGC), characterized in that it includes the means for calculating predicted traffic volumes for each traffic direction as well as the means for distributing these predicted traffic volumes to the Media

Gateways (MG).

9. Media Gateway (MG), characterized in that it includes the means for receiving a predicted traffic volume as well as the means for reserving the resources in the packet data network (PN) corresponding to a predicted traffic volume.